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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,282	02/19/2004	Armand Bettinelli	PF030040	4246
24498	7590	03/23/2005	EXAMINER	
THOMSON LICENSING INC. PATENT OPERATIONS PO BOX 5312 PRINCETON, NJ 08543-5312			MACCHIAROLO, PETER J	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/782,282	BETTINELLI ET AL.	
	Examiner	Art Unit	
	Peter J. Macchiarolo	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>02/19/2004</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 02/19/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the depth of the cavities being greater than or equal to one third of the height of the barrier ribs (claim 2), the maximum width of the cavities is greater than or equal to 50  $\mu\text{m}$  (claim 3), the width of the cavities is greater than or equal to twice the width of the notches (claim 4), the barrier ribs having a porosity that is great than or equal to 25% and in that the width of the notches is less than 60  $\mu\text{m}$  (claim 5) and the height of the barrier ribs is greater than or equal to 120  $\mu\text{m}$  must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet,

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even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

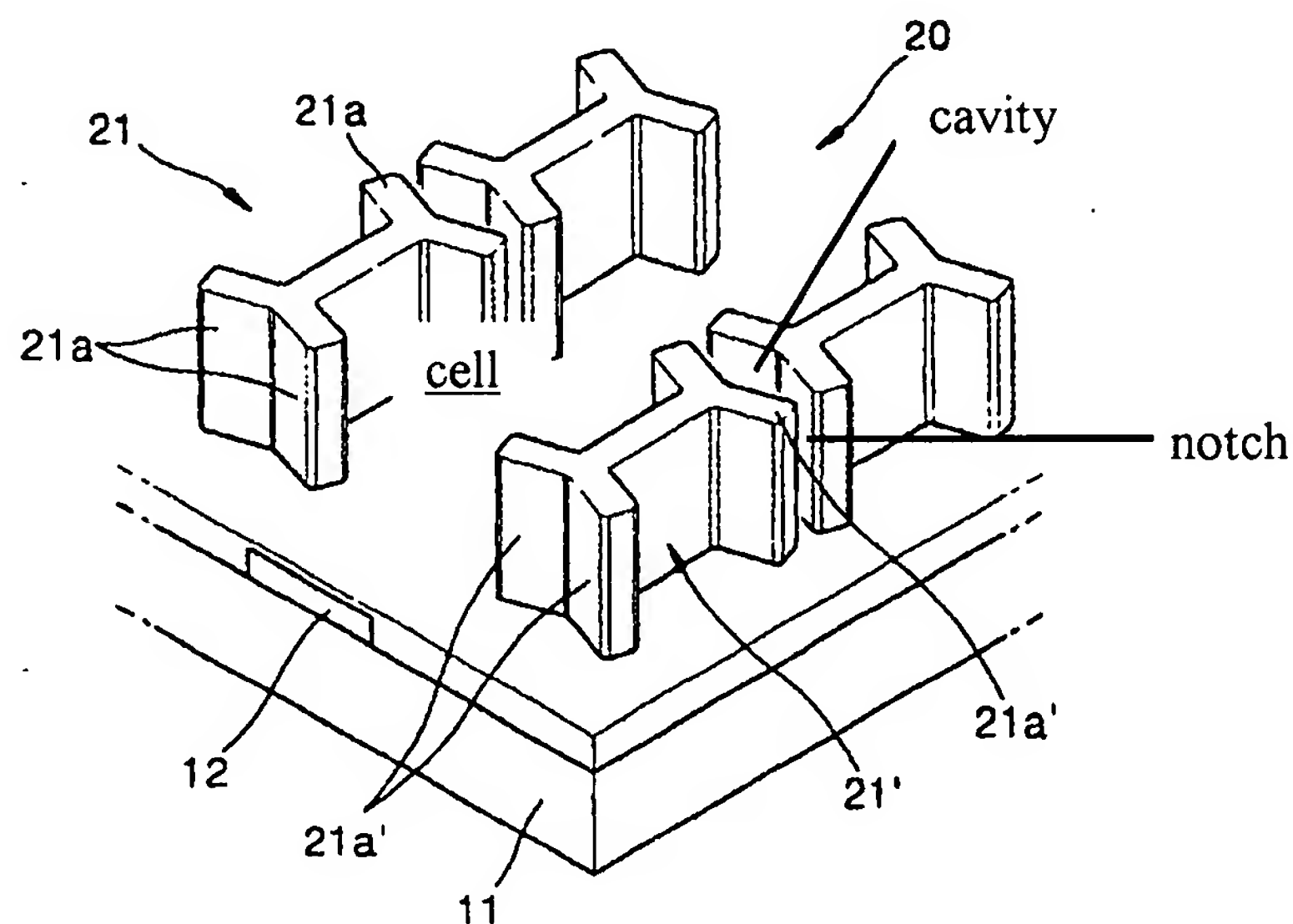
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**5. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Kang (USPN 6841928; “Kang”).**

6. Regarding claim 1, Kang shows in figures 2 and 3, a plasma panel comprising two plates (40, 11) leaving a sealed space between them, which space is filled with discharge gas and is divided into discharge cells (reproduced below) that are bounded between these plates by barrier ribs (21) forming an array, the said cells being distributed in rows and columns, characterized in

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that the barrier rib portion that separates any two adjacent cells of the same column includes a cavity (reproduced below) that is made in the thickness of the said rib and emerges at the top of the said rib, and also includes a notch (reproduced below) that brings the two said cells into communication with each other through the said cavity.



7. Regarding claim 2, Kang shows in figure 2 that the depth of the said cavities is greater than one third of the height of the barrier ribs.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**8. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang.**

9. Regarding claims 3-4, Kang is silent the maximum width of the cavities, measured in the direction of the said rows, is greater than twice the width of the notches measured in the same direction, or the maximum width of the cavities being greater than 50 um.

10. However, Kang infers this limitation in figure 2, and further, teaches that the shapes and arrangements of the partitions (31-33) can be varied in many ways to suit a particular PDP configuration, which encompasses the maximum width of the cavities being greater than 50um, or being greater than or equal to twice the width of the notches and that one skilled in the art will arrive at the proper dimensions best suited for the particular display panel.<sup>1</sup> One would be motivated to modify the cavities to have a maximum width greater than twice the width of the notches, and the maximum width of the cavities being greater than 50 um to allow for efficient outgassing, phosphor efficiency, and reduced crosstalk for a particular size and resolution PDP.

11. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Kang with

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<sup>1</sup> Kang, col. 3, ll. 40-50.

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the maximum width of the cavities being greater than 50um, or being greater than or equal to twice the width of the notches.

12. **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kang in view of Applicant cited Bettinelli et al (WO 02/052602; "Bettinelli").**

13. Regarding claim 5, Kang is silent to the barrier ribs having a specific porosity and that the width of the notches is less than 60 um.

14. However, as discussed above, Kang infers that the one skilled in the art can discover the appropriate dimensions for the notches and cavities.

15. Furthermore, as Applicant states on page 9, ll. 18-24, Bettinelli teaches that having a rib porosity of greater than 25% allows for an optimum outgassing procedure. The Examiner notes that Bettinelli has a publication date of July 4, 2002, as evidenced by the following website:

<http://v3.espacenet.com/origdoc?DB=EPODOC&IDX=WO02052602&F=8&QPN=WO02052602>

16. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Kang with the width of the notches is less than 60 um, and porosity of the ribs being greater than 25%.

17. **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kang in view of Awamoto et al (USPN 6768485; "Awamoto").**

18. Regarding claim 6, Kang is silent to the height of the barrier ribs.

19. However, Awamoto teaches that this configuration is sufficient to hold the needed phosphor to produce working subpixels in a plasma display device.



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20. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Kang with the ribs being 120 um or more.

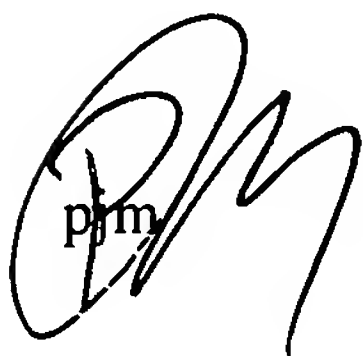
*Conclusion*

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375. The examiner can normally be reached on 8:30 - 5:00, M-F.

23. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



pjm



**JOSEPH WILLIAMS**  
**PRIMARY EXAMINER**